CCS-C

Command and Control System—Consolidated (CCS–C)

Mission/Vision

Provide a state-of-the-art satellite command and control system for our Nation's military communications satellites by developing, deploying and testing the Command and Control System-Consolidated (CCS-C). The CCS-C will provide 3rd and 4th Space Operations Squadrons (SOPS) of the 50th Space Wing with a modern, flexible and operationally streamlined system to replace functionality currently provided by the 20-year-old Command and Control Segment (CCS).

Background

In 1997, the MILSATCOM Joint Program Office (MJPO) received direction from Headquarters Air Force Space Command to migrate off CCS no later than October 2005. By FY06, CCS costs to support MILSATCOM systems would be approximately $40 million per year—an amount unacceptable to the Air Force. The MJPO created the CCS-C Program to facilitate the control of the current MILSATCOM fleet and future MILSATCOM families and reduce sustainment costs.

Description

CCS-C will control over 30 military communications satellites across four families, including Defense Satellite Communications System (DSCS); Milstar; Wideband Gapfiller Satellite (WGS); and Advanced Extremely High Frequency (AEHF) System, using state-of-the-art commercial telemetry, tracking and commanding (TT&C) technology.

CCS-C consists of modern, commercially available computer servers and workstations, running commercially available TT&C software packages on a local area network-based client/server architecture and will contribute to increased availability and reliability over the legacy system's outdated mainframe architecture and custom-designed software. CCS-C has the potential to reduce the cost of sustainment by at least 50 percent and provide warfighters with increased capability over today's system. Features like automation of routine tasks, with the capability to automate more complicated satellite operations tasks, contribute to increased warfighter efficiency in controlling our Nation's most critical communications assets.

CCS-C was acquired in a two-phase process. The first phase, called the Demonstration Phase, was a year long effort beginning in February 2001. The contractors competed in a "fly-off" in which each designed and built their own prototype of the final system and demonstrated it by controlling a non-operational satellite in space, which

served as the test bed for the contractors' systems. Space operators from the 3SOPS and 4SOPS performed the demonstration using each contractor's prototyped system. In March 2002, following a downselect source selection, the Development/Sustainment Phase contract option was awarded to Integral Systems, Inc. (ISI) of Lanham, Maryland.

The CCS-C program office has accomplished significant milestones in the Development Phase. Successful design reviews were held for DSCS, Milstar, and Wideband Gapfiller Satellite systems. Infrastructure installations include a Contractor Development Laboratory in Maryland, the CCS-C Test Facility, Satellite Operations Center (SOC)-32 and SOC-42 at Schriever AFB. ISI has completed developmental testing with resounding success for DSCS and Milstar.

During FY05, CCS-C successfully underwent operational testing and evaluation (OT&E) for the legacy DSCS satellites. Successful OT&E provided the segue for 50 SW to transition the DSCS satellites from the current CCS to CCS-C in February 2005. Trained space vehicle and satellite systems operators are flying DSCS satellites on CCS-C, and the program is progressing on schedule for readiness to support the transition of Milstar by September 2005. At the same time, CCS-C will be ready to support the new WGS and AEHF satellites that will begin launching in 2006 and 2008 respectively, and potentially other advanced military communications satellite programs.

General Characteristics

Primary Function:	S-band satellite command and control
Primary Contractor:	Integral Systems, Inc.
Capability:	18 Simultaneous supports (SAFB) 6 Simultaneous supports (VAFB) 5 Training activities (SAFB) 12 Training activities (VAFB)

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